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ABSTRACT

This paper presents findings of a study that explored the relationships among principals' leadership behaviors and teacher efficacy in Wisconsin middle schools involved in building-level change efforts. An adaptation of Bandura's social cognitive learning theory of self-efficacy (A. Woolfolk and W. Hoy 1993) provided the theoretical framework. Phase 1 of the research surveyed 10 principals and 280 teachers from 10 middle schools. Principals and teachers completed The Nature of Leadership Survey (Leithwood 1993) and teachers completed an adapted version of S. Gibson and M. Dembo's Teacher Efficacy Scale (1984). Data for phase 2 were collected through interviews with the 10 principals and 34 teachers. The data indicate that three of Leithwood's transformational leadership behaviors--modeling behavior, inspiring group purpose, and providing contingent rewards--were significantly related to general teaching efficacy. "Models behaviors" and "provided contingent rewards" were significantly related to personal teaching efficacy. Qualitative data confirmed these results and suggested eight additional leadership behaviors that reinforce and sustain teacher efficacy. In addition, a significant difference was found between general teaching efficacy and personal teaching efficacy. An implication is that if a strong sense of efficacy motivates teachers to higher levels of competence and success, then an increased focus on this teacher attribute is critical. (Contains 38 references.) (Author/LMI)

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Teacher Efficacy: Influence of Principal Leadership Behavior

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EXPLORING RELATIONSHIPS BETWEEN PRINCIPALS' LEADERSHIP BEHAVIORS AND TEACHERS' SENSE OF EFFICACY

Abstract: The primary purpose of this investigation was to explore the relationships among principals' leadership behaviors and teacher efficacy in middle schools in Wisconsin involved in building-level change efforts. An adaptation of Bandura's social cognitive learning theory of self-efficacy by Woolfolk & Hoy provided the theoretical framework. The sample for this study included principals and teachers from 10 selected middle schools. Principals and teachers completed The Nature of Leadership Survey (Leithwood, 1993) and teachers completed an adapted version of Gibson & Dembo's Teacher Efficacy Scale (1984). Also, principals and a selected sample of teacher participants from three case study sites were interviewed to examine in context the relationship between principals' leadership behaviors and teacher efficacy. Findings indicated that three of Leithwood's transformational leadership behaviors including: models behavior, inspires group purpose and provides contingent rewards were found to be significantly related to general teaching efficacy, whereas, models behaviors and provides contingent rewards were significantly related to personal teaching efficacy. Qualitative data confirmed these results and suggested eight additional leadership behaviors that reinforce and sustain teacher efficacy. In addition, a significant difference was found between general teaching efficacy and personal teaching efficacy.

As educators and others attempt to improve public education, teachers have become targets of change and perhaps victims of efforts aimed at improving their performance to meet the goal most central to schools - the improvement of student learning. In every state, mandates, regulations, and reform efforts have been promulgated, codified, and implemented. Yet for success to occur, policy makers and school leaders need to become attuned to the prevailing sense of uncertainty among teachers, and respond by reinforcing their capabilities and providing the instructional support necessary to empower educators and students to collectively achieve their fullest potential.

Based on a review of the literature on quality of teacher work life and educational reform conducted by Louis and Smith in 1991, a persistent theme emerged involving the impact of the professional work environment on teachers' socio-psychological perceptions of their work and its outcomes.

> The premium is not on effectiveness in the classroom but on compliance to larger school routines. Thus in many schools day-to-day conditions have become personally dispiriting, and teachers' satisfaction, creativity, and overall sense of efficacy have been sapped. (p. 24)

Over the past decade, research on the impact of the work environment and the social realities of teaching and learning has been a theme in the work of Milbrey McLaughlin (1986) and Lieberman and Miller (1991). They warn of the costly consequences of ignoring the social, psychological, and physical conditions affecting teacher work in schools. Further, they argue that our most competent and talented teachers have been led to believe that they can't and consequently won't teach. Such beliefs have resulted in varying degrees of apathy, helplessness, and little motivation to remain in the profession. Since then little has changed. The most important resource in our schools today is the teacher, yet issues most central to the health of the teaching profession continue to be ignored.

Over the past 15 years, considerable research has been conducted to examine the link of teachers' sense of efficacy to school reform efforts and instructional effectiveness in schools. As a result, there is general agreement that teacher efficacy is an important dimension that forges the link between these factors. Though used interchangeably, the terms--efficacy, sense of efficacy, and self-efficacy are defined as the extent to which a teacher believes that he or she can affect student performance (McLaughlin & Marsh, 1978).

The purpose of this study was to explore the relationships between principals' leadership behaviors and teachers' sense of efficacy in selected middle schools in Wisconsin involved in significant building-level change efforts. Based on an understanding of these relationships, this paper describes how principals in 10 middle schools influence teachers' sense of personal and professional efficacy and their impact on instructional and school improvement.

The investigation was guided by the following questions. 1) Are selected leadership behaviors of principals related to teachers' general teaching efficacy and personal teaching efficacy? 2) In what ways do principals influence teachers' sense of efficacy? 3) What constraints limit the influence of principals' leadership behaviors on teachers' sense of efficacy? These questions were addressed using data from 280 middle school teachers and 10 principals from 10 selected middle schools.

Background

The literature on efficacy cites multiple factors known to affect a teacher's sense of efficacy, however, none focuses exclusively on the influence of the principal, the one person uniquely positioned as formal leader in the school. To date, there is limited empirical data to support the direct effects of principals' leadership behavior on teacher efficacy and related conditions in schools. If a strong sense of efficacy motivates teachers to higher levels of competence and success, then an increased focus on this teacher attribute is critical to the improvement of student performance. With ever-increasing expectations, principals are presented with many challenges and responsibilities in their daily work. Therefore, it is important

for them to understand the relationship between how they spend their time and the impact on teachers' individual and collaborative work.

Efficacy

The theoretical framework for this study is grounded in Bandura's (1977) cognitive social learning theory of self-efficacy, which addresses motivation based on appraisals of outcomes and feedback. Bandura defined self-efficacy as "peoples' judgements of their capabilities to organize and execute courses of action required to attain designated types of performances" (1986, p. 391). Furthermore, he treated self-efficacy as a multi-dimensional trait and differentiated between outcome and efficacy expectations, in that people can believe that certain actions will produce certain results (outcome expectations); however, if they do not feel capable of performing such actions, they may neither initiate nor persist in them (efficacy expectations).

Under situations where both expectancies differ, one must consider both types independently. People who measure high on both expectancies will tend to respond with confidence even in the face of obstacles. Those measuring low on both expectancies will likely give up in similar circumstances. Finally, those with discrepant scores may become motivated to intensify their effort in light of perceived negative outcomes. Moreover, Bandura argued that self-efficacy is, by definition, a situation-specific determinant of behavior and not a global personality trait. He concluded, however, that once self-efficacy is firmly established, it has the potential to generalize across a wide range of contexts and activities.

Since Bandura first conceptualized self-efficacy, educational researchers (Berman & McLaughlin, 1977; Ashton, Buhr & Crocker, 1984; Gibson & Dembo, 1984; Guskey, 1987), recognizing an important link between teachers' sense of efficacy and student achievement, have explored the nature of this construct and have developed measures to assess it. However, in reviewing the literature, Woolfolk and Hoy (1990) and Smylie (1991) underscored the need to clarify the construct of self-efficacy, because investigators using the term tend to define and measure it in different ways. Thus, a problem exists, in that individual studies may be using different conceptions and definitions of teacher efficacy, which results in inappropriate comparisons across empirical studies (Ross, 1993).

The following study is based on Hoy and Woolfolk's (1993) two dimensional construct of self-efficacy, general teaching efficacy and personal teaching efficacy, as adapted from Bandura's cognitive social learning theory of self-efficacy. Specifically, Hoy and Woolfolk reconceptualized Bandura's dimension of outcome expectations as "a general belief about the power of teaching to reach difficult children" (p. 357), or "What I think we can do...," and labeled this dimension, general teaching efficacy (GTE). Further, they associated Bandura's dimension of efficacy expectations with earlier definitions (Berman & McLaughlin, 1977; Ashton, Buhr & Crocker, 1984; Gibson & Dembo, 1984) indicating the belief in one's own ability to make a difference in student achievement or "What I think I can do...," and labeled this dimension, personal teaching efficacy (PTE).

A review of the literature provides an historical overview of empirical studies using the construct of teacher efficacy and identifies meaningful variables known to be significantly related to teacher efficacy.

Empirical Studies Using the Construct of Efficacy

Specifically, studies related to this construct have shown that teachers' sense of efficacy significantly relates to meaningful variables, such as *student achievement and motivation* (Armor, Conry-Osequera, Cox, Kin, McDonnel, Pascal, Pauly & Zellman, 1976; Ashton, Webb, & Doda, 1983; Dembo & Gibson, 1985; Ashton & Webb, 1986; Tracz & Gibson, 1986; Guskey 1987; Midgley, Feldlaufer & Eccles, 1989), *successful implementation of innovative programs* (Berman & McLaughlin, 1977; Stein & Wang, 1988; Guskey, 1988), and *organizational factors affecting schools* (Brookover, Schweitzer, Schneider, Beady, Flood, & Wisenbaker, 1978; Brookover & Lezotte, 1979; Fuller, Wood, Rapoport, & Dornbusch, 1982; Rosenholtz, 1985; Smylie, 1988; Newmann, Rutter & Smith, 1989; Tarter, Bliss & Hoy, 1989; Hoy & Woolfolk, 1993). These studies document Ashton and Webb's (1986) assertion that teachers have different attitudes about their competence that become apparent in their professional behavior and, in turn, affect the performance of their students.

The first study linking teachers' sense of efficacy with student achievement involved the results of one of the 100 Rand Corporation evaluations of Title III ESEA (Elementary and Secondary Education Act) projects. In a study of the Los Angeles schools, Armor, et al. (1976) found that teacher efficacy was "strongly related to increases in reading [achievement]" (p.24). Other researchers concurred with

these results and added the impact of efficacy on mathematic achievement (Ashton, Buhr, & Crocker, 1983; Tracz & Gibson; 1986; Midgley, Feldlaufer & Eccles, 1989). Moreover, Ashton and Webb (1986) reported behaviors of principals that significantly influenced teacher motivation and student achievement, such as: (a) recognizing and supporting efforts; (b) clarifying roles and expectations; (c) encouraging a sense of competence and confidence in teachers and students; (d) empowering teacher decision-making; (e) buffering staff against classroom intrusions; and (f) building bonds of community within the school.

In a second Rand Corporation evaluation, the Change agent study, Berman & McLaughlin (1977) examined four clusters of broad factors crucial to the successful implementation and continuation of local staff development efforts. Among other significant findings in this study, teachers' sense of efficacy was identified as the most powerful teacher attribute in the analysis and showed a strong, positive relationship to all project outcome measures. Also, in a review of these findings, McLaughlin and Marsh (1978) reported that,

> the effects of a sense of efficacy were among the strongest of all the relationships identified in the entire analysis. Teacher attitudes about their own professional competence, in short, appear to have major influence on what happens to change-agent projects and how effectively they are. (p. 85)

Further, a review of the literature shows various relationships to teachers' sense of efficacy, many of which involve alterable variables that can be influenced by the principal (Ashton & Webb, 1986; Berman & McLaughlin, 1977; Stein & Wang,

1988; Brookover & Lezotte, 1979; Newmann et al., 1989; Fuller et al., 1982; Tarter, Bliss & Hoy, 1989; Hoy & Woolfolk, 1993; Moore & Esselman, 1992). Notwithstanding, norms of isolation, mediocrity, and fear of failure, conditions endemic in our schools today, can greatly impede efforts by school principals to influence teachers' sense of efficacy. As Lortie (1975) noted,

> Teachers are not sure they can make all their students learn. They hope for widespread or even universal effectiveness, but such aspirations receive too little reinforcement to yield assurance. Thus they are ready to accept indications of partial effectiveness as the basis for pride. (p. 132)

Methods and Procedures

To address the major research questions in this study, a multiple methods design was employed. Data sources involved: quantitative survey data, telephone interviews, structured interviews with teachers and principals, observational data, and researcher field notes.

Sample Selection

Initially, 14 educational experts, representing a variety of agencies in the state, were contacted by telephone and asked to identify middle schools involved in significant building-level change efforts. Based on the nominations of these experts, 62 middle schools were identified and principals in all identified schools were contacted. Telephone interviews lasting thirty to forty-five minutes were conducted with principals in all 62 schools.

The primary purposes of data collection at this stage were to verify the change effort specific to each school, to determine the extent of teacher involvement, and to probe each principal's level of involvement in that change effort. Based on the telephone interview data collected, the following criteria were used to select the 10 schools that would be included in the final study. First, principals had to have served as administrators in the building for two or more years. Second, the school had to be involved in a significant change effort related to curriculum or staff development designed to affect student performance. Next, the innovation had to involve a majority of staff who were actively participating in the change effort. Finally, the change effort needed to be implemented at a level beyond the initial stage. Including schools involved in a specific activity or change effort was critical in meeting Bandura's conceptualization of self-efficacy as a situation-specific construct.

Following the telephone interviews and the analysis of criteria for selection, the final sample for this study included 10 principals and 280 teachers from 10 selected middle schools in Wisconsin for Phase 1 of the study. Principals in the 10 selected schools were first notified by telephone. to discuss dates and times, procedures for data collection, and other pertinent information. Next, letters of intent were sent including a statement guaranteeing the school district, school, and individual respondents anonymity. Visits were scheduled over a two-month period to collect data at scheduled faculty meetings, department meetings, preparation periods, and individually, when required. Teachers were recognized for

their participation in the study, then given information briefly describing the study's purpose, procedures, methods, and the possibility of a follow-up structured interview.

For Phase 2 of the study, three case study schools were selected according to a different set of criteria: the school with the highest reported general teaching efficacy (GTE), the school with the highest reported personal teaching efficacy (PTE), and the school with the lowest reported combined efficacy. A representative sample of 34 teachers, selected from a pool of volunteers, were interviewed across three schools: Harmony, Homewood, and Pleasantview Middle Schools. Also, all 10 principals were interviewed. High and low efficacy schools were purposefully included in this phase to explore differences in perceptions among teachers and principals in varying contexts. Interviews were conducted over a one-month period.

Instrumentation

Phase 1

The variables of general and personal teaching efficacy were measured by teachers' responses to a 16-item modified version of Gibson & Dembo's Teacher Efficacy Scale (1984) based on an adaption by Woolfolk & Hoy (1993). A factor analysis conducted by Gibson & Dembo of their original 30-item scale yielded acceptable reliability coefficients in only 16 items, specifically .78 for the personal teaching factor and .75 for the general teaching factor. Consequently, the analysis of their study was based on responses to the 16 items that yielded significant loadings ($\geq .45$) on either of the two factors. Results of the independence of the two

dimensions, general and personal teaching efficacy, conformed to Bandura's theory of self-efficacy.

Dimensions of efficacy for the present study were assessed based on teacher responses to eight items measuring general teaching efficacy and eight items measuring personal teaching efficacy. Gibson & Dembo (1984) assured convergent and discriminant validity of the Teacher Efficacy Scale by using a multi-trait-multi-method analysis across two methods of measurement (closed-ended and open-ended) as suggested by Campbell & Fiske (1959). Correlations of variables within and between methods discriminated teacher efficacy from other constructs which have also been found to affect student achievement.

The behaviors of principals were measured using teachers' and principals' responses to 34-items from The Nature of Leadership portion of The Change in Secondary Schools: Staff Survey (Leithwood, 1993), which was designed to measure transformational leadership skills that fostered both individual and organizational improvement. Of these 34-items, nine items relating to the leader's influence on innovation were modified to represent the building-level change effort identified at each of the 10 middle schools. When this scale was first developed, seven dimensions of transformational leadership were identified (Leithwood, Jantzi, & Fernandez, 1993). Reliabilities (Cronbach's alpha), ranging between .65 and .97 were calculated for each dimension. However, in 1994, Leithwood redefined transformational leadership as a four-dimensional construct.

Given the fluidity of dimensions defined by Leithwood, two factor analyses of survey data were completed for the data collected in the present investigation. These analyses involved factor solutions of principal factoring of the correlation matrix to analyze the underlying factor structure of principals' and teachers' responses to the 34-item The Nature of Leadership Survey. The first analysis yielded sorted rotated factor loadings and communalities corresponding to Leithwood's seven factors resulting in repetition and overlapping of factors. Consequently, a second analysis was run and yielded sorted rotated factor loadings and communalities on five factors: 1) models behavior (.61-.72), 2) inspires group purpose (.61-.79), 3) provides contingent rewards (.70-.78), 4) holds high performance expectations (.64-.83), and 5) provides support (.65-.70. As evidenced, a relatively rigorous level for significance of factor loadings ($\geq .60$) was designated as a criterion for inclusion of individual items in the factor structure.

Lastly, a Personal Data Sheet was developed to gather descriptive data on the personal characteristics of teachers. The information requested included: (1) position in the school; (2) gender; (3) grade level assignment; (4) academic emphasis; (5) grouping practices; (6) years of experience in current position; (7) highest level of formal education; and (8) signature indicating a willingness to participate in a 30 minute structured interview.

In summary, three written survey instruments were used to gather data to address questions and to test hypotheses in this study. During Phase 1 of the study, teacher respondents completed the Personal Data Sheet, the Teacher Efficacy Scale,

and The Nature of Leadership Survey. Principals completed only The Nature of Leadership Survey. In the next section, other data sources in this investigation are described.

Phase 2

Following school visits and the collection of survey data, all 10 building principals and a representative sample of teacher volunteers from three schools were interviewed to facilitate a more in-depth probe into specific behaviors of principals that influenced teachers' sense of efficacy. These data provided insight into the identification of meaningful behaviors of principals and the contexts of leadership behaviors from the teachers' point of view. School selections were based on aggregated levels of teacher efficacy by building. Harmony Middle School had the highest reported level of general teaching efficacy (GTE); Homewood Middle School had the highest reported level of personal teaching efficacy (PTE); and Pleasantview Middle School had the lowest reported level of combined teacher efficacy (GTE and PTE).

Structured interviews, lasting 45-90 minutes, were conducted with each of the 10 building principals (5 females and 5 males). In addition, 12 teachers from Harmony Middle School (6 females and 6 males, 41% of teachers surveyed), 10 teachers from Homewood Middle School (4 females and 6 males, 83% of teachers surveyed), and 12 teachers from Pleasantview Middle School (7 females and 5 males, 53% of teachers surveyed) participated in related interviews which lasted approximately 25-40 minutes.

Interviews consisting of open-ended questions probed: sources of teacher efficacy, the behaviors of principals deemed most important to acquiring and maintaining a sense of competence in teaching, principal support for the implementation of a given change effort, and constraints that deprive teachers of principal influence. All interviews were script-taped, audiotaped, and later transcribed for analysis.

Data Analysis

To examine relationships between principals' leadership behaviors and teachers' sense of efficacy, decisions affecting analysis were made. First, general and personal teaching efficacy scores from the Teacher Efficacy Scale were not aggregated, since past research had established that the construct of teacher efficacy consisted of two different dimensions that were only moderately related statistically. Second, to address the major research questions and test hypotheses of the study, multiple levels of analysis were employed to explore relationships among variables within the individual, within the school, and across schools. Thus data obtained through the Personal Data Sheet, the Teacher Efficacy Scale, The Nature of Leadership Survey, and 44 structured interviews were analyzed and triangulated for purposes of interpretation.

First, coding procedures were used to facilitate computational analysis and statistical calculations. Second, a comparison of two factor analyses indicated that the construct of transformational leadership consists of five dimensions rather than seven dimensions as Leithwood and his colleagues (1993) previously identified.

Third, methods of descriptive statistics, one-way analysis of variance (ANOVA), and correlational analysis were used to determine significant relationships and differences among variables pertinent to the study by and across schools.

Fourth, each interview was read, coded, and grouped according to leadership themes by school, then similarities and differences between teachers and their respective principal were generated. Fifth, a cross-case analysis was conducted for the three study sites to identify principal leadership themes related to teachers' sense of efficacy. Sixth, congruence between survey and qualitative data was examined. Finally, interview data from the seven principals, not involved in Phase 2 of the study, were added to confirm data analyzed from the three case study sites.

Findings

The results of this study indicated numerous findings regarding relationships among principal leadership behaviors, teachers' sense of efficacy, and demographic and organizational factors. Nonetheless, only findings related to the three major questions in this study are reported in this paper.

General and Personal Teacher Efficacy

A statistically significant difference between GTE and PTE was established, despite both dimensions being strongly correlated ($r = .357$). An analysis of scores on the Teacher Efficacy Scale indicated that the mean GTE score for all teachers was 3.4411, and the mean PTE score was 4.4826 on a 1-6 point scale. A one-way analysis of variance revealed that teachers' PTE was significantly higher than teachers' GTE ($F = 272$, $p = 0.000$).

Transformational Leadership Behavior and Teacher Efficacy

A correlation analysis, based on teacher responses on the Teacher Efficacy Scale and The Nature of Leadership Survey, indicated that significant relationships were found between leadership behaviors of principals and teachers' sense of efficacy. Statistically significant relationships were reported between total leadership behavior and GTE (r = .201) and PTE (r = .142); however, no significant relationships were found between principals' influence on innovation and either GTE or PTE.

In addition, significant relationships were found between GTE and three transformational leadership factors (Leithwood, et al., 1993): models behavior, provides contingent rewards, and inspires group purpose. Also, two transformational leadership behaviors were significantly related to teachers' PTE: models behavior and provides contingent rewards (see Table 1).

Table 1. Correlation Matrix of the Relationship Between GTE, PTE, and Principals' Leadership Behavior Across Schools

Leadership Behaviors of Principals	General Teaching Efficacy	Personal Teaching Efficacy
5 Factors		
Models Behavior	0.230*	0.146*
Inspires Group Purpose	0.148*	0.103
Provides Contingent Rewards	0.195*	0.119*
Holds High Performance Expectations	0.074	0.097
Provides Support	0.069	0.037
Total Leadership Behavior	0.201*	0.142*
Influence on Innovation	0.058	0.078

* The correlations computed above involve an N = 280, and indicate that relationships are statistically significant at $r \geq .119$.

Congruence between Survey and Interview Data

To determine which leadership behaviors had the greatest impact on teacher efficacy, interview data across schools confirmed survey results and added eight principal leadership behaviors that reinforce and sustain teacher efficacy (see Table 2).

Table 2. Behaviors of Principals that Reinforce and Sustain Teacher Efficacy

- Models Behavior
- Inspires Group Purpose
- Recognizes Teacher Efforts and Accomplishments
- Provides Personal and Professional Support
- Promotes Teacher Empowerment and Decision-Making
- Manages Student Behavior
- Creates a Positive Climate for Success
- Fosters Teamwork and Collaboration
- Encourages Innovation and Continual Growth
- Believes in Staff and Students
- Inspires Caring and Respectful Relationships

Interview data supported the statistical findings that indicated that *models behavior* was significantly related to both general and personal teaching efficacy. At Harmony, teachers maintained that their principal "models communication, cooperation, and openness by her open door policy...this adds to the security we feel...caring here is critical and it is modeled from the top on down." Another claimed that this principal "modeled risk-taking which made a big difference in the atmosphere...eliminating study halls because teachers hated them, students misbehaved in them, and they were unproductive." Principals at Harmony and Pleasantville were also admired for their passion for modeling self-learning and holding similar expectations for others. The importance of modeling open and honest professional interactions among principals was also a common theme which

permeated discussions regarding student behavior, staff performance, and working conditions in general.

Comments from teacher respondents also confirmed the relationship between *provides contingent rewards* and teacher efficacy. At each school, teachers maintained that providing contingent rewards was exceedingly important in a profession where limited recognition and rewards is offered for the tasks accomplished. Recognition and rewards were visualized in a variety of ways across schools, "trust and freedom to do as we believe...public relations...awards...public announcements of accomplishments...feedback on job performance...special privileges...leadership opportunities...socials and celebrations." Despite the variety, a sample of teachers across schools indicated that what is done is never enough.

The survey and interview data also suggested a significant relationship between *inspires group purpose* and general teaching efficacy. Across the three study sites, principals were expected to create a shared vision which centered on creating a student-centered atmosphere. Reflecting on mutually-held goals at Homewood, one teacher stated, "We are willing to put enormous amounts of effort into something we feel will pay off...high energy learning environments are strongly supported here." At Harmony there existed a consistent team perspective where innovation and experimentation abound. Staff in this school avoided the normal pitfalls of being involved in multiple innovations and credit their principal for regaining control of their school. A focus on behavior management and teamwork changed this school dramatically since this principal assumed her

position three years ago. Through her support for a site-based effort, discipline problems have been cut to a fraction. A consistent team effort is pervasive across people, programs, and purposes.

Although statistically significant relationships were not found between *provides support* and either GTE or PTE, interview respondents expressed the importance of both personal and professional support by their principals in ways that related to both GTE and PTE. Teacher responses intimated a pervasive need for support, which perhaps encompass the other seven behaviors and involve a balance between personal and professional support. Many teachers conveyed that their principals listen, care, facilitate their needs, recognize their efforts and accomplishments, and support them concerning personal matters; however, without providing resources and up-dated materials, constructive feedback, visible and accessible instructional leadership, and support regarding parent and student issues, personal support from principals alone is not sufficient.

Additional Principal Leadership Behaviors Influencing Teacher Efficacy

Professional Support

Empowerment and shared decision-making was discussed repeatedly in all three schools. One teacher's expression, "We are free to be who we are and do what we need to be successful at Harmony," was pervasive throughout this school. Teachers revealed the importance of feeling respected for the knowledge they brought to their subject areas and the decisions they made. One teacher at Homewood maintained, "I think the biggest thing is the trust. She trusts me to do a

good job. That is empowering and I appreciate that." Finally, at Pleasantview, one teacher captured a critical need, "He gives us freedom, trusts us as professionals, encourages us to try new ideas and strategies, and finds the resources to support special interests and projects." On the other hand, when this sense of empowerment was perceived to be lacking, it was found to be "devastating, it breaks the spirit" and leaves teachers feeling powerless...You have to have some self-worth or your performance will go down."

Also, in schools where principals were actively involved in managing and monitoring student behavior, a sense of shared purpose in a respectful and supportive climate was reported by teachers. One teacher expressed it well, "Discipline is the cornerstone to any successful building. You must have control and you must hold students accountable. Once you lose them, you're dead." In high efficacy schools, teachers expressed feelings of confidence and appreciation for certain and consistent behavior on the part of their principals and their focus on creating a positive climate. However, it was noted that in schools newly initiating change, where staff were first learning to work collaboratively in teams, striving to reach consensus, learning to resolve conflict, and experiencing freedom to make decisions, feelings of uncertainty were transferred to students. Students tended to respond to the mood at hand and act accordingly.

Also, when pervasive feelings of professionalism existed and teachers collaborated and worked as a team, a strong sense of community and positive climate also existed. As a result, teacher behaviors characterized extensions of

efficacy, such as risk-taking, initiating and implementing innovative ideas and teaching strategies, and furthering their own growth. For instance, the strong commitment of Harmony's principal to teamwork and collaboration encouraged teachers to learn successful approaches and strategies from one another, "stretching to be unique, but also the best you can be." Moreover, to assure a team approach at Pleasantview, the principal developed communication systems and organizational structures that "set the stage for learning." Once the stage was set, commitment and cooperation were vital to success.

Principals who modeled and encouraged risk-taking were successful in fostering norms of experimentation and continual growth. "Going out on a limb with us," adapting policy, and fighting for programs, implied a visible means of support. Teachers at all schools spoke well of leadership which placed them on the "cutting edge" and supported requests to engage in professional growth. One teacher argued,

> If teachers aren't willing to try something new, what can we expect from our students? Teachers need to be role models for change, to break down the fear because our kids will change so many more times than we ever thought of changing in our lives."

Perks were critical to teachers' feelings of success, as "teachers have so few." One respondent contended that,

> When you look at what can motivate a person [to grow], it is some of the small perks like being sent to a conference, sharing a special project that can

bring you recognition, or being asked to do different things for the district. Those are the true gifts and rewards...recognition among your peers and colleagues.

Personal Support

The importance of providing personal support by exhibiting a belief in teachers through caring and respectful relationships was critical to the respondents' feeling of self-worth and competence. Teachers at Harmony Middle School identified their principal in some way as "a fabulous supporter...an encourager." More specifically, one teacher added,

> I think that is probably the most important thing, the support of your administrator, your superior. I am comfortable with my superiors and I am happy, because when you have problems with students and parents, they tell you when you are doing a good job, and that gives you confidence.

Consistently, teachers in high efficacy schools conveyed a spirit of trust, sensing that principals believed in their practice and decision-making. Also, principals encouraged teachers to establish rapport and demonstrate a similar belief in their students. A sense of "family spirit" and community existed in these schools.

Constraints Limiting the Affect of Principal Influence

In response to constraints limiting the influence of principals' leadership behavior on teacher efficacy, interview data and observations identified three major concerns. First, both school and non-school related constraints interfered with leadership behaviors linked to teacher efficacy. Aside from principal role overload,

outdated structures and schedules, and ongoing budget cuts identified at Homewoood, and paradoxical teacher attitudes reported at Pleasantview, the remaining seven principals, not involved in Phase 2 of this study, revealed that unfocused priorities, negative environmental indicators, and decreasing public support for education also tended to nullify the positive linkage between strong proactive leadership by principals and teachers' personal and professional efficacy.

Second, differing forms of leadership were evident at Homewood where the principal was assigned dual leadership in both the elementary and middle school, thus expecting teachers to substitute for building-level leadership. Such opportunities for shared leadership were viewed differently among staff. Some teachers expressed a sense of pride and respect for the decisions they were empowered to make. This translated into very positive effects on their sense of efficacy. Further, other comments suggested little necessity for someone in the role of principal to provide continual building-level leadership to supervise and evaluate teacher efforts. On the other hand, other teachers resented the "extra duties and responsibilities" added to an already time-consuming schedule. Without leadership training and recognition for their efforts and subsequent decisions, some teachers sought to avoid these responsibilities and concentrate their efforts on what they are being paid to do and what they do best - teach.

Third, interviews and observations indicated that in schools where student behavior was appropriately managed and monitored, and a sense of shared purpose and community existed in a safe learning environment, teachers reported a strong

sense of efficacy and seemed more open to change. However, in schools with student discipline problems, undefined goals, and highly disputed issues, change efforts were difficult to implement.

The desire for a shared vision was evident at Pleasantview, yet a climate of divisiveness impeded progress in meeting school goals. Paradoxical views regarding principal leadership had a negative effect on teachers' sense of efficacy. As noted by many respondents, perhaps this negative effect was most evident in the area of student behavior. Teachers argued that students were simply reflecting the inconsistency and conflict that characterized the climate and unstable mood of the building. Though goals and efforts at Pleasantview were similar to those of Harmony and Homewood Middle Schools, expressions of success were less evident due to disagreements over student discipline, an unstable and contentious professional work environment, and a number of other unresolved issues related to teacher empowerment, decision-making, support, and recognition.

Discussion

The construct of teacher efficacy is well documented by empirical research. Further, the findings in this study support previous studies (Gibson & Dembo, 1984; Woolfolk & Hoy, 1990; Hoy & Woolfolk, 1993) that teacher efficacy is a two-dimensional construct, consisting of general teaching efficacy (GTE) and personal teaching efficacy (PTE). Early in this study, Hipp and Bredeson (1995) found a significantly significant difference between the two dimensions, despite being strongly correlated ($r = .357$). They surmised that higher PTE scores were likely the

result of the contexts in which teachers find themselves on a daily basis. Many schools are not structured for collaborative efforts. Rather, existing norms of isolation and individualism cause teachers' judgements of effectiveness to be based on what they know of their own teaching in their own classrooms. Considering the extent of public criticism of teachers that continues to escalate, it is reasonable to assume that teachers may believe that they have more control over their own teaching and its impact on students than exists with their peers. Thus, public criticism and doubt can lead teachers to question the competence and commitment of their professional colleagues.

Next, to address the primary question of this study and determine which leadership behaviors were most strongly associated with each dimension of teacher efficacy, Leithwood's dimensions of transformational leadership were used as an organizer. However, preliminary findings suggest that transformational leadership behavior consists of five rather than seven factors (factor loadings $\geq .60$ on each) described by Leithwood and his colleagues (1993). My findings support the impact of these five leadership behaviors in varying degrees: models behavior, inspires group purpose, provides contingent rewards, holds high performance expectations, and provides support.

The variety and complexity of tasks drawing on principals' time and energy are overwhelming. Statistical findings suggest that not all dimensions of transformational leadership are strongly associated with teachers' GTE and PTE. Specifically, models behavior, provides contingent rewards, and inspires group

purpose were significantly related to teachers' GTE. Whereas, models behavior and provides contingent rewards were significantly related to teachers' PTE. Thus, findings provide important empirical guides as to how principals can impact teachers' individual and collaborative work by focusing on conditions that help teachers acquire and sustain feelings of competence and worth. Hipp and Bredeson (1995) liken these behaviors to Edgar Schein's (1985) primary leadership mechanisms for influencing organizational cultures. They send powerful messages to teachers, staff, and students that principals influence others more by their actions than by words alone.

Though group purpose may affect staff individually, statistical results suggest that its strength lies in the impact on the group as a whole--what teachers can do together to succeed (GTE). Comments throughout interviews relating to "inspiring group purpose" reflected notions of "we" and "us" versus " I" and "me." The impact of group purpose was strongest at Harmony Middle School where the principal was viewed as an active and visible leader, who held staff accountable for achieving school goals.

Also, a review of the literature suggests a relationship between principal leadership expression and the context of innovation which was not found in this study. Statistical findings showed no evidence that the change efforts implemented in the 10 study schools were significantly related to principals' leadership behaviors. In essence, the change efforts were not perceived as principal-directed efforts, but programs and innovations typically initiated and guided by teachers. Considering

the many challenges and responsibilities that define the role of principal, the context of innovation did not appear to be a highly prominent condition which highlighted principal leadership in the minds of these teacher participants.

In addition, findings suggest additional behaviors that influence teacher efficacy not evident in Leithwood's dimensions of transformational leadership behavior. These behaviors extend our notion of alterable variables which can be used to strengthen conditions in schools and stimulate teachers' feelings of efficacy and optimism toward the future of education. In Lortie's classic study (1975), he found that many teachers experienced significant doubts about the value of their work with students. Again, the idea of uncertainty suggests that teachers have few mechanisms to evaluate their efforts, or to assess their relative impact on long term student outcomes. In his study, no other aspect of teacher work resulted in as much emotional response as teachers' inability to assess their own outcomes - an imperative to teachers' ability to develop a high sense of efficacy.

Finally, findings which addressed constraints limiting the influence of principals' leadership behavior on teacher efficacy implied that constraints perceived within the power of the principal appeared to have a more negative effect on teacher efficacy than non-school constraints. For instance, most frustration voiced at Homewood was the result of non-school related constraints, issues in which neither the principal nor staff had any control. First, the principal's dual role presented an extreme role overload. Second, budget cuts delayed replacing badly needed texts and materials and resulted in staff layoffs. Third, pervasive

provincialism and out-dated physical and organizational structures also limited the principal and staff to implement components of a true middle school concept. Despite these constraints on the principal's influence, teachers at Homewood believed in themselves and one another, perhaps as a result of the trust and confidence the principal expressed in her teachers.

In contrast, in-school constraints such as a lack of trust, a divisive climate, escalating student discipline problems, and paradoxical views regarding support, recognition, empowerment and decision-making are deemed within the power of the principal to control. When these conditions exist, as shared by a faction of teacher respondents at Pleasantview, feelings of despair, betrayal, uncertainty, loneliness, and vulnerability greatly impede teachers' sense of efficacy and affect the entire school community.

Implications

Following are implications and recommendations for administrative practice and preparation related to principals' leadership behavior and teacher efficacy. First, the link between teacher efficacy and student achievement is well established in the literature. As well, the primary focus of principals' instructional leadership is student learning. The findings in this study provide evidence that 11 principal leadership behaviors can be used to promote student learning through teacher efficacy. Rosenholtz, Bassler & Hoover-Dempsey (1986) synthesized research on organizational antecedents of teacher learning and found that, in effective schools, "principals set the tone of a school and in many ways shape the organizational

conditions under which teachers work" (p. 92). Further, they argued that principals' actions conveyed a belief that teacher and student learning outcomes are closely connected to teacher effort. Since, teachers and students are constantly looking for symbolic cues regarding what is valued in school, a deliberate emphasis on these 11 behaviors needs to permeate the principal's daily work.

Second, growing criticism of America's schools has accentuated feelings of despair among teachers while school leaders and policy makers mandate school reform. As reported in the 27th Annual Phi Delta Kappa/Gallup Poll of the Public's Attitudes Toward the Public Schools (September, 1995), chronic student discipline problems and unhealthy school environments continue to intensify feelings of uncertainty and interfere with improvement efforts. As a result, educational leaders need to be sensitive to the human-side of education. They must be aware of non-school constraints which cause frustration and send a powerful message that can be perceived as devaluing the importance of teachers and education in general. In response, principals who set the tone for teaching and learning are more apt to gain the trust of staff. As one respondent expressed, "It is very difficult to persuade teachers to change. Teachers don't like change anyway. It is much more difficult if you don't have their trust. Trust is everything."

Third, as a result of reform and improvement efforts, issues of empowerment and decision-making create mixed feelings among teachers. In essence, new roles, rules, and responsibilities imply new demands and result in greater accountability for student learning. Many teachers feel unprepared and continue to function

within antiquated structures and procedures without support. A lack of training in leadership skills, group process techniques, and effective change strategies often result in many short-lived efforts and feelings of inadequacy that make teachers vulnerable and threaten their sense of efficacy.

Fourth, relationships between teacher efficacy, teacher receptivity to change, and successful implementation of new ideas and innovations need further investigation. Perhaps teachers' receptivity to change may be based on their trust in the principal, a level of trust acquired as a result of past support during previously adopted change efforts. Rosenholtz (1985) believed that teacher competence and principal behaviors may have reciprocal effects. For instance, as principals' actions may help shape school conditions that contribute to teacher competence, teachers who feel competent may, in turn, promote supportive and facilitative behaviors of principals. Further, principals who feel certain about the quality of their teachers' ability and motivation may give up their need to control and empower their teachers to make collective decisions. As success increases, so may teacher motivation also increase to show a greater commitment to norms encouraging collegiality and continuous growth.

Fifth, further research is needed to examine the validity of principals' transformational leadership behavior as a five-factor construct. Since findings indicated in the preliminary stages of this study (Hipp & Bredeson, 1995) differ from earlier findings (Leithwood, Jantzi & Fernandez, 1993), it is important to examine factors of transformational leadership with other samples and populations.

Sixth, the finding that GTE and PTE are significantly different supports previous research indicating their independence as two distinct dimensions of teacher efficacy. Nevertheless, replication of this study with other samples and populations at various levels and with other types of districts would determine if these findings are idiosyncratic to this study or can be confirmed. The difference between these dimensions also suggests further study of the individual impact of GTE and PTE on student achievement. This research could provide new insights into the individual and collaborative work of teachers and its impact on students.

In summary, using a multiple methods design to examine the two-dimensional construct of teacher efficacy (GTE and PTE) and its relationship to principals' transformational leadership behaviors provides multiple insights into the most important educational resources in schools today, the teachers and principals. This study reveals direct principals behaviors, as well as indirect symbolic forms of instructional leadership that influence teachers' work and its outcomes. If a strong sense of efficacy motivates teachers to higher levels of competence and success, then an increased focus on this teacher attribute is critical. Nonetheless, if school leaders continue to ignore teachers' sense of efficacy and environmental conditions affecting their work, then committed young teachers, as well as experienced teachers, will begin to question their potential to affect change in student behavior; and worse yet, may decide to leave the profession.

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